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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,503	07/28/2000	Myoung Jun Song	K-191	3785

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P.O. BOX 221200  
CHANTILLY, VA 20153

EXAMINER
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NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 03/19/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/628,503

Applicant(s)

SONG, MYOUNG JUN

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,5,8-19,22-24,26-29,32-38,40,41 and 43-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,5,8-11,14-19,27,28,33-38,41 and 44-48 is/are allowed.
- 6) ☒ Claim(s) 1,2,12,13,22-24,26,29,32,40,43 and 49-54 is/are rejected.
- 7) ☒ Claim(s) 44-46 and 48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: an English translation of JP 11-015425.

### **DETAILED ACTION**

1. This Office Action is made in response to applicant's amendment filed on 01/07/2004 (entered into the file wrapper as Paper No. 23). Claims 1, 2, 4, 5, 8-19, 22-24, 26-29, 32-38, 40, 41 and 43-54 are currently pending in the application. An action follows below:

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 12, 22-24, 26 and 49-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (USPN: 5,986,636), and further in view of Sawdon (USPN: 5,276,458).

As per claims 1, 2, 12, 23, 24, 26 and 54, the claimed invention reads on Wu as follows:

Wu discloses an apparatus and an associate method for interfacing video information in a computer system, the apparatus comprising a main body or a computer (a computer 1, fig. 5) for outputting a video signal through video signal line (R, G and B color signals), a horizontal sync signal (Hs), a vertical sync signal (Vs) (col. 1, line 66 through col. 2, line 2, col. 4, lines 15-16), and, through a communication line or a display data channel (a bus 70) (see figs. 5 and 6B, col. 6, lines 11-28), for outputting display type information (an information packet, col. 7, line 12) including addresses and data including a plurality of display parameters, such as front port times, back porch times, and etc. (see col. 7, lines 10-20). Wu further teaches the apparatus comprising a monitor (60) for detecting the display type of the corresponding video signal and for displaying the video signal (see fig. 5, col. 6, lines 10-38). Accordingly, the Wu reference discloses all the

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claimed limitations except that the Wu reference does not disclose expressly the display type information including a data identifying recognition code that identifies a specific kind of the corresponding display type information, and data corresponding to the data-identifying recognition code, as recited in claims above.

However, Sawdon discloses expressly the display information communicated between the display device (88) and the display adapter (92) of the main body or a computer, which includes all elements shown in fig. 1 except for the display device (88), via serial link (3) (col. 3, lines 10-14). By virtue of the operation described at col. 3, line 45 through col. 4, line 4, Sawdon further teaches the display type information including identification codes, each including a coded timing parameter, which includes an inherent data identifying recognition code that identifies a specific kind of the corresponding display type information, such as sync pulse widths, active video periods and blanking intervals, and a timing parameter (or data) corresponding to the data-identifying recognition code, in order to allow the adapter logic (96) of the main body to decode and to identify the specific kind of the received transfer parameter. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to substitute the format of the Sawdon display type information, which includes a data identifying recognition code and data corresponding to the data-identifying recognition code, in view of the teaching in the Sawdon reference, for the Wu display type information, because a person of ordinary skill in the art at the time of the invention was made would recognize that the benefit for doing so is to provide the Wu display device capable of simply and correctly identifying the transfer parameters.

Regarding to claims 22 and 49-52, as discussed above, as noting at col. 7, lines 10-20, Wu teaches the display information comprising a plurality of data types (a plurality of addresses and display parameters) such as a number of dots for a horizontal period, a number of back porches for the horizontal period, a number of horizontal lines for a vertical period and a number of horizontal lines of a back porch for the vertical period, and each of the plurality of data types having a unique recognition code associated therewith.

Regarding to claim 53, as discussed in the rejection of claim 1 above, the combination of Wu and Sawdon discloses all the claimed limitations except for the recognition code composed of two bits. However, absent a showing of criticality it would have been within the level of skill in the art and obvious to one having ordinary skill at the time of the invention was made to engineering design any suitable number of bits of the recognition code as desired as was judicially recognized in re Rose, 105 USPQ 237 (CCPA 1955) and in re Reven, 156 USPQ 679 (CCPA 1968). Furthermore, it is to be appreciated that any suitable number of bits of the recognition code may be employed to carry out the invention, and that one skilled in the art at the time of the invention was made to recognize that the motivation for doing so is to transmit and to receive the necessary information in a short period of time, thereby increasing the processing speed.

4. Claims 13, 29, 32, 40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Sawdon, and further in view of Arai et al (USPN: 5,457,473), hereinafter Arai.

As per claims above, as discussed above, Wu discloses the main body outputting a clock pulse (a clock signal, col. 7, line 11) for recognizing the display type information, through a

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communication line or a display data channel (a bus 70) (figs. 5 and 6B, col. 6, lines 11-28 and col. 7, lines 10-13). Further, since Wu's clock pulse is used to recognize the display type information, the display type information is synchronized with the clock pulse. In other words, Wu discloses every thing except that Wu does not disclose expressly the clock pulse included in the vertical sync signal and the display type information synchronized with the vertical sync signal.

However, Arai discloses a related apparatus comprising a computer (1a) for outputting the information, such as a control signal, to the monitor (1b) by adding the information to one of the video signal, the horizontal sync signal and a vertical sync signal, and a vertical sync signal synchronizing the transmitted information and comprising a clock pulse (the description at col. 6, lines 39-44, discloses the vertical sync signal including a pulse having a leading edge and synchronizing the transmitted information at the leading edge), for recognizing the transmitted information (further see figs. 4-5 and the description at col. 5, lines 39-67), thereby transmitting information from the computer to the monitor without the use of a communication line. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to utilize Arai's teaching above in the Wu reference, i.e., making Wu's the vertical sync signal including the clock pulse and synchronizing the display type information, because this would avoid the use of the additional communication interface, thereby reducing the cost of the apparatus.

5. Claims 1, 2, 12, 22-24, 26 and 49-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (USPN: 5,986,636), and further in view of Kimura et al. (JP 11-015425,

cited in IDS filed on 10/16/2003, see the enclosed English translation for the following rejections), hereinafter Kimura.

As per claims 1, 2, 12, 23, 24, 26 and 54, the claimed invention reads on Wu as follows: Wu discloses an apparatus and an associate method for interfacing video information in a computer system, the apparatus comprising a main body or a computer (a computer 1, fig. 5) for outputting a video signal through video signal line (R, G and B color signals), a horizontal sync signal (Hs), a vertical sync signal (Vs) (col. 1, line 66 through col. 2, line 2, col. 4, lines 15-16), and, through a communication line or a display data channel (a bus 70) (see figs. 5 and 6B, col. 6, lines 11-28), for outputting display type information (an information packet, col. 7, line 12) including addresses and data including a plurality of display parameters, such as front port times, back porch times, and etc. (see col. 7, lines 10-20). Wu further teaches the apparatus comprising a monitor (60) for detecting the display type of the corresponding video signal and for displaying the video signal (see fig. 5, col. 6, lines 10-38). Accordingly, the Wu reference discloses all the claimed limitations except that the Wu reference does not disclose expressly the display type information including a data identifying recognition code that identifies a specific kind of the corresponding display type information, and data corresponding to the data-identifying recognition code, as recited in claims above.

However, as noting in fig. 2 and table 1 on page 3, Kimura discloses expressly the display information (the EDID data) communicated between a display device and a system unit via DDC interface, including a data identifying recognition code that identifies a specific kind of the corresponding display type information, such as resolution of a display unit, correspondence frequency, and the display mode and timings, and data corresponding to the data-identifying



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recognition code. See paragraphs [0007], [0011]. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to substitute the format of the Kimura display type information, which includes a data identifying recognition code and data corresponding to the data-identifying recognition code, in view of the teaching in the Kimura reference, for the Wu display type information, because a person of ordinary skill in the art at the time of the invention was made would recognize that the benefit for doing so is to provide the Wu display device capable of simply and correctly identifying the transfer data.

Regarding to claims 22 and 49-52, as discussed above, as noting at col. 7, lines 10-20, Wu teaches the display information comprising a plurality of data types (a plurality of addresses and display parameters) such as a number of dots for a horizontal period, a number of back porches for the horizontal period, a number of horizontal lines for a vertical period and a number of horizontal lines of a back porch for the vertical period, and each of the plurality of data types having a unique recognition code associated therewith.

Regarding to claim 53, as discussed in the rejection of claim 1 above, the combination of Wu and Kimura discloses all the claimed limitations except for the recognition code composed of two bits. However, absent a showing of criticality it would have been within the level of skill in the art and obvious to one having ordinary skill at the time of the invention was made to engineering design any suitable number of bits of the recognition code as desired as was judicially recognized in re Rose, 105 USPQ 237 (CCPA 1955) and in re Reven, 156 USPQ 679 (CCPA 1968). Furthermore, it is to be appreciated that any suitable number of bits of the recognition code may be employed to carry out the invention, and that one skilled in the art at the time of the invention was made to recognize that the motivation for doing so is to transmit and to

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receive the necessary information in a short period of time, thereby increasing the processing speed.

6. Claims 13, 29, 32, 40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Kimura, and further in view of Arai et al (USPN: 5,457,473), hereinafter Arai.

As per claims above, as discussed above, Wu discloses the main body outputting a clock pulse (a clock signal, col. 7, line 11) for recognizing the display type information, through a communication line or a display data channel (a bus 70) (figs. 5 and 6B, col. 6, lines 11-28 and col. 7, lines 10-13). Further, since Wu's clock pulse is used to recognize the display type information, the display type information is synchronized with the clock pulse. In other words, Wu discloses every thing except that Wu does not disclose expressly the clock pulse included in the vertical sync signal and the display type information synchronized with the vertical sync signal.

However, Arai discloses a related apparatus comprising a computer (1a) for outputting the information, such as a control signal, to the monitor (1b) by adding the information to one of the video signal, the horizontal sync signal and a vertical sync signal, and a vertical sync signal synchronizing the transmitted information and comprising a clock pulse (the description at col. 6, lines 39-44, discloses the vertical sync signal including a pulse having a leading edge and synchronizing the transmitted information at the leading edge), for recognizing the transmitted information (further see figs. 4-5 and the description at col. 5, lines 39-67), thereby transmitting information from the computer to the monitor without the use of a communication line. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to

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utilize Arai's teaching above in the Wu reference, i.e., making Wu's the vertical sync signal including the clock pulse and synchronizing the display type information, because this would avoid the use of the additional communication interface, thereby reducing the cost of the apparatus.

***Allowable Subject Matter***

7. Claims 44-46 and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 4, 5, 8-11, 14-19, 27, 28, 33-38, 41 and 44-48 are allowed. See the statement of reasons for the indication of allowable subject matter regarding to independent claims 4, 14, 17 and 27 in the last Office Action dated 08/22/2003. Further, independent claims 5 and 8 are allowed for the same reason as set forth in independent claim 4. Claims 44-46 and 48 are objected, but would be allowable for the same reason as set forth in independent claim 4.

***Response to Arguments***

9. It is noted Applicant that the drawing objection, the claim objection and the rejections under 35 USC 112, first and second paragraphs, in the last Office Action dated 8/22/2003, are withdrawn in view of the amendment filed on 01/07/2004.

10. Applicant's arguments with respect to independent claims 1, 2, 12 and 26, pages 20-21, have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

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11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

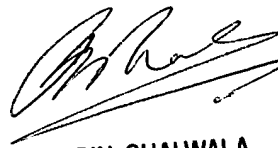
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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose telephone  
number is (703) 306-0377.

JHN

March 15, 2004



BIPIN SHALWALA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600